

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Monoethylenglykol

Version 4.0

Print Date 16.10.2011

Revision Date 12.08.2011

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : Monoethylenglykol
 Substance name : ethanediol
 Index-No. : 603-027-00-1
 || C&L-No. : 02-2119752517-33-0000
 CAS-No. : 107-21-1
 EC-No. : 203-473-3

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.
 Recommended restrictions on use : At that time we do not yet have information on use restrictions. They will be included in this safety data sheet when available.

1.3. Details of the supplier of the safety data sheet

Company : Brenntag GmbH
 Stinnes-Platz 1
 DE 45472 Muelheim an der Ruhr
 Telephone : +49 (0)208-7828-0
 Telefax : +49 (0)208-7828-7299
 E-mail address : InfoSDB@brenntag.de
 Responsible/issuing person : Umwelt / Sicherheit

1.4. Emergency telephone number

Emergency telephone number : +49 (0)208-7828-0 Available 24h/7d

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	Hazard category	Target Organs	Hazard statements
Acute toxicity	Category 4	---	H302

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Specific target organ toxicity - repeated exposure	Category 2	Kidney	H373
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For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol / Category of danger	Risk phrases
Harmful (Xn)	R22

For the full text of the R-phrases mentioned in this Section, see Section 16.



Most important adverse effects

Human Health : See section 11 for toxicological information.
No further information available.

Physical and chemical hazards : See section 9 for physicochemical information., No further information available.

Potential environmental effects : See section 12 for environmental information.
No further information available.

2.2. Label elements**Labelling according to Regulation (EC) No 1272/2008**

Hazard symbols	:	 
Signal word	:	Warning
Hazard statements	:	H302 Harmful if swallowed. H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.
Precautionary statements	:	
Prevention	:	P260 Do not breathe mist/ vapours/ spray.

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P264		Wash skin thoroughly after handling.
P270		Do not eat, drink or smoke when using this product.
Response	: P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
	P330	Rinse mouth.
Disposal	: P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
 • ethanediol

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.
No other information is available.

3. Composition/information on ingredients
3.1. Substances

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)		Classification (67/548/EEC)
		Hazard class / Hazard category	Hazard statements	
ethanediol				
Index-No. : 603-027-00-1		Acute Tox.4	H302	Xn; R22
CAS-No. : 107-21-1		STOT RE2	H373	
EC-No. : 203-473-3	<= 100			
C&L-No. : 02-2119752517-33-0000				

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures
4.1. Description of first aid measures

General advice : Remove from exposure, lie down. If breathing is irregular or

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stopped, administer artificial respiration. Take off all contaminated clothing immediately. Symptoms of poisoning may not appear for several hours. Keep under medical supervision for at least 48 hours. Consult a physician.

If inhaled : Remove to fresh air. Give oxygen. Consult a physician.

In case of skin contact : Wash off immediately with soap and plenty of water.

In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Consult a physician.

If swallowed : Induce vomiting, but only if victim is fully conscious. Rinse mouth. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

Effects : No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically. No further information available.

5. Firefighting measures
5.1. Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Incomplete combustion may form toxic pyrolysis products.

5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool closed containers exposed to fire with water spray.

6. Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Keep people away from and upwind of spill/leak. Provide adequate ventilation. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapour/spray.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Ensure adequate ventilation. This material and its container must be disposed of as hazardous waste. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Further information : Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

For personal protection see section 8.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with the skin and the eyes. Keep container tightly closed. Provide sufficient air exchange and/or exhaust in work rooms. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Take off all contaminated clothing immediately. Do not breathe gas/fumes/vapour/spray. Avoid contact with the skin and the eyes. Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

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Requirements for storage areas and containers : Keep in an area equipped with solvent resistant flooring. Keep away from heat and sources of ignition. Keep in a dry, cool and well-ventilated place. Store in original container.

Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking.

Further information on storage conditions : Product is hygroscopic.

Advice on common storage : Incompatible with oxidizing agents.

7.3. Specific end uses

Specific use(s) : No information available.

8. Exposure controls/personal protection

8.1. Control parameters

Derived No Effect Level

Workers, Systemic effects, Inhalation	: 35 mg/m ³
Workers, Systemic effects, Skin contact	: 106 mg/kg
Consumers, Systemic effects, Inhalation	: 7 mg/m ³
Consumers, Systemic effects, Skin contact	: 53 mg/kg

Predicted No Effect Concentration

Fresh water	: 10 mg/l
Marine water	: 1 mg/l
Intermittent releases	: 10 mg/l
sewage plant	: 199,5 mg/l
Fresh water sediment	: 20,9 mg/kg
Soil	: 1,53 mg/kg

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Component: ethanediol**CAS-No.****107-21-1****Other OELs**

TRGS 900, Skin designation:
Can be absorbed through the skin.

TRGS 900, AGW:
10 ppm, 26 mg/m³, (2)
If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).

EU ELV, Short Term Exposure Limit (STEL):
40 ppm, 104 mg/m³
Indicative

EU ELV, Time Weighted Average (TWA):
20 ppm, 52 mg/m³
Indicative

8.2. Exposure controls**Personal protective equipment***Respiratory protection*

Advice : In case of insufficient ventilation, wear suitable respiratory equipment.
Recommended Filter type:A

Hand protection

Advice : Wear suitable gloves.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Protective gloves should be replaced at first signs of wear.

Material : polychloroprene
Break through time : >= 8 h
Glove thickness : 0,5 mm

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Material : Nitrile rubber
Break through time : ≥ 8 h
Glove thickness : 0,35 mm

Material : butyl-rubber
Break through time : ≥ 8 h
Glove thickness : 0,5 mm

Eye protection

Advice : Tightly fitting safety goggles

Skin and body protection

Advice : Wear suitable protective clothing.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Form : liquid
Colour : colourless
Odour : sweet
Odour Threshold : no data available
pH : 6 - 7,5 (100 g/l; 20 °C)
Melting point/range : -12,4 °C
Boiling point/boiling range : 194 - 205 °C (DIN 53171)
Flash point : 111 °C (Method: DIN 51758)
Evaporation rate : no data available
Flammability (solid, gas) : not applicable

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Upper explosion limit	:	15,3 %(V)
Lower explosion limit	:	3,2 %(V)
Vapour pressure	:	< 0,1 hPa (20 °C)
Relative vapour density	:	no data available
Density	:	1,11 g/cm ³ (20 °C) (DIN 51757)
Water solubility	:	(20 °C completely miscible
Partition coefficient: n-octanol/water	:	log Kow -1,34
Ignition temperature	:	410 °C (DIN 51794)
Thermal decomposition	:	> 200 °C
Viscosity, dynamic	:	21 mPa.s (20 °C)
Viscosity, kinematic	:	18,919 mm ² /s
Explosive properties	:	EU legislation: Formation of explosive air/vapour mixtures is possible.
Oxidizing properties	:	not applicable

9.2. Other information

No further information available.

10. Stability and reactivity**10.1. Reactivity**

Advice : No information available.

10.2. Chemical stabilityAdvice : No decomposition if stored and applied as directed.
No further information available.**10.3. Possibility of hazardous reactions**

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Hazardous reactions : Incompatible with oxidizing agents.

10.4. Conditions to avoid

Thermal decomposition : > 200 °C

10.5. Incompatible materials

Materials to avoid : No information available.

10.6. Hazardous decomposition products

Hazardous decomposition products : None known.

11. Toxicological information**11.1. Information on toxicological effects****Acute toxicity****Inhalation**

Vapours may cause irritation, headache, dizziness and may have narcotic effects and other central nervous effects.

Further informationOther relevant toxicity information : Danger by skin absorption.
Irritating to respiratory system.
Handle in accordance with good industrial hygiene and safety practice.Experience with human exposure : organic solvent
Chronic exposure damages the brain and the central nervous system.
Kidney injury may occur.
Avoid repeated exposure.
Prolonged exposure may cause chronic effects.
Harmful by ingestion**Component: ethanediol****CAS-No.
107-21-1****Acute toxicity**

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Oral

LD50 : 4000 mg/kg (rat)
These literature data deviate from the classification prescribed by the EC.

Dermal

LD50 : ca. 10600 mg/kg (rabbit)

Irritation**Skin**

Result : No skin irritation (rabbit)

Eyes

Result : Mild eye irritation (rabbit)

Sensitisation

Result : Patch test on human volunteers did not demonstrate sensitization properties.

CMR effects**CMR Properties**

Mutagenicity : Not mutagenic in Ames Test.

12. Ecological information**12.1. Toxicity****Component: ethanediol****CAS-No.
107-21-1****Acute toxicity****Fish**

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LC50 : 18500 mg/l (Oncorhynchus mykiss; 96 h)

Toxicity to daphnia and other aquatic invertebrates.

EC50 : > 10,000 mg/l (Daphnia magna; 48 h)

algae

EC50 : 6500 - 7500 mg/l (Pseudokirchneriella subcapitata; 96 h)

Bacteria

EC50 : 10000 mg/l (Pseudomonas putida; 16 h)

12.2. Persistence and degradability**Component: ethanediol****CAS-No.**

107-21-1

Persistence and degradability**Biodegradability**Result : 56 % (Exposure Time: 28 h)(OECD 301 C)
biodegradable**12.3. Bioaccumulative potential****Component: ethanediol****CAS-No.**

107-21-1

Bioaccumulation

Result : Does not bioaccumulate.

12.4. Mobility in soil**Component: ethanediol****CAS-No.**

107-21-1

Mobility

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: (No information available.)

12.5. Results of PBT and vPvB assessment

Component: ethanediol	CAS-No.
	107-21-1

Component: ethanediol	CAS-No.
	107-21-1

Results of PBT and vPvB assessment

Result : no data available

12.6. Other adverse effects
Additional ecological information

Result : Do not flush into surface water or sanitary sewer system.

Component: ethanediol	CAS-No.
	107-21-1

Component: ethanediol	CAS-No.
	107-21-1

Biochemical Oxygen Demand (BOD)

Result : 1245 mg/g

13. Disposal considerations
13.1. Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains.

Contaminated packaging : Dispose of as unused product. Dispose of in accordance with local regulations.

European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

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14. Transport information

Not dangerous goods for ADR, RID and IMDG.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Note : not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

WGK (DE) : ethanediol: WGK Identification Number: 105; WGK:1; slightly water endangering; Classification source is Annex 2.

Major Accident Hazard Legislation : - Does not fall under the German StörfallV.

Other regulations : Occupational restrictions: Take note of Dir 92/85/EEC on the safety and health of pregnant workers at work and of Dir 94/33/EC on the protection of young people at work.

Notification status

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ethanediol:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
INV (CN)	YES	
ENCS (JP)	YES	(2)-230
JEX (JP)	YES	(2)-2267
ISHL (JP)	YES	(2)-230
NZ CLSC	YES	
TSCA	YES	
EINECS	YES	203-473-3
KECI (KR)	YES	KE-13169
PICCS (PH)	YES	

15.2. Chemical Safety Assessment

Currently we do not have any Information from our supplier about this.

16. Other information**Full text of R-phrases referred to under sections 2 and 3.**

R22 Harmful if swallowed.

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

|| Indicates updated section.

The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text